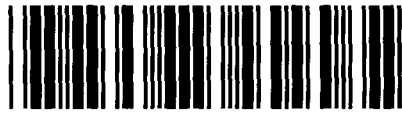


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Item Number: 5

Addendum StartPage: 0

**DIRECT TESTIMONY
OF RUSSELL J. MARUSAK, WITNESS FOR
ONCOR ELECTRIC DELIVERY COMPANY LLC & AEP TEXAS INC.**

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1 **DIRECT TESTIMONY OF RUSSELL J. MARUSAK**

2 **I. POSITION AND QUALIFICATIONS**

3 Q. PLEASE STATE YOUR NAME, POSITION, AND ADDRESS.

4 A. My name is Russell J. Marusak. I am employed by Halff Associates, Inc.
5 ("Halff"), an engineering consulting firm. I hold the position of
6 Environmental Scientist and also serve as a Project Manager. My
7 business address is 1201 North Bowser Road, Richardson, Texas 75081.

8 Q. PLEASE DESCRIBE YOUR PROFESSIONAL QUALIFICATIONS.

9 A. Since 1998, when I was first employed as an environmental consultant, I
10 have provided environmental planning and consulting services for electric
11 transmission line projects, transportation projects, land development
12 projects, and other linear projects, including natural gas, sewer, and water
13 pipelines. Since 2002, I have managed or provided technical support for
14 several routing and environmental impact analyses for 345 kV
15 transmission line projects in Texas. For example, I managed three
16 environmental assessments and routing studies for 345 kV Oncor
17 transmission line projects that were included in the Public Utility
18 Commission of Texas's ("Commission") Competitive Renewable Energy
19 Zone ("CREZ") initiative (Docket Nos. 37408, 38140, and 38597), ranging
20 in length from 40 to 160 miles. Since CREZ I have managed several
21 routing and environmental impact analyses for multiple 345 and 138 kV
22 transmission lines, including the Riverton – Sand Lake 345/138 kV
23 transmission line and the Odessa EHV – Riverton and Moss – Riverton
24 345 kV transmission line projects recently approved by the Commission.
25 Currently, I am managing the environmental assessment and routing
26 study for the proposed Sand Lake – Solstice 345 kV transmission line
27 project ("Proposed Transmission Line Project"). My educational and
28 professional qualifications are more fully presented in Exhibit RJM-1
29 attached hereto.

30 Q. HAVE YOU PREVIOUSLY TESTIFIED BEFORE THE COMMISSION?

PUC Docket No. 48785

**Marusak – Direct
Oncor & AEP Texas
Sand Lake – Solstice CCN**

1 A. Yes, I submitted pre-filed testimony in Commission Docket Nos. 37408,
2 38140, 38597, 47368 and 48095. I presented live testimony in
3 Commission Docket Nos. 38597, 47368 and 48095.

4 **II. PURPOSE OF TESTIMONY**

5 Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?

6 A. The purpose of my testimony is to introduce, support, sponsor, and
7 describe the *Environmental Assessment and Alternative Route Analysis*
8 *for the Proposed Sand Lake – Solstice 345 kV Transmission Line Project*
9 *in Pecos, Reeves and Ward Counties* (“EA”) prepared by Halff at the
10 request of Oncor Electric Delivery Company LLC (“Oncor”) and AEP
11 Texas Inc. (“AEP Texas”). The EA is included as Attachment No. 1 to the
12 Application for a Certificate of Convenience and Necessity (“CCN”) for a
13 Proposed 345 kV Transmission Line (“Application”). The Application, as it
14 may be amended and/or supplemented, will be offered into evidence by
15 Oncor and AEP Texas at the hearing. The facts and statements
16 contained in the EA, which I am sponsoring, are true and correct.

17 Q. ON WHOSE BEHALF ARE YOU TESTIFYING?

18 A. I am testifying on behalf of the two joint applicants in this proceeding,
19 Oncor and AEP Texas (together, “Applicants”).

20 **III. ENVIRONMENTAL ASSESSMENT AND ROUTING STUDY**

21 Q. WHY DID HALFF PREPARE THE EA?

22 A. Halff was retained by Oncor and AEP Texas to perform and prepare the
23 EA for the Proposed Transmission Line Project. My responsibility for the
24 Proposed Transmission Line Project included oversight and participation
25 in all elements of the preparation of the EA, from baseline data acquisition
26 to development of the alternative routes.

27 Q. WAS ANYONE OTHER THAN YOU INVOLVED IN THE EA PROCESS?

28 A. Yes. A team of professionals with expertise in different environmental and
29 land use disciplines (such as soils, physiography, geology, water
30 resources, terrestrial and wetland ecology, community values and

1 resources, aesthetics, cultural resources, and mapping, among others)
2 was assembled by Halff (the "Halff Project Team") and was involved in
3 data acquisition, routing analysis, and environmental assessment for the
4 Proposed Transmission Line Project. Section 8.0 of the EA presents a list
5 of the primary preparers of the document.

6 Q. WHAT DOES THE EA ADDRESS?

7 A. The EA provides a detailed description of the data gathered and analyzed
8 by Halff in association with the Proposed Transmission Line Project, and
9 the routing procedures and methodology utilized by Halff to delineate and
10 evaluate alternative routes.

11 Q. PLEASE DESCRIBE THE OBJECTIVES OF THE EA.

12 A. The objectives of the EA were to select and evaluate alternative
13 transmission line routes for the Proposed Transmission Line Project. The
14 approach taken by Halff consisted of a series of tasks designed to address
15 the requirements of Section 37.056(c)(4)(A)–(D) of the Texas Utilities
16 Code, 16 Texas Administrative Code ("TAC") §§ 22.52(a)(4) and
17 25.101(b)(3)(B), including the Commission's policy of prudent avoidance,
18 and CCN application form requirements (including but not limited to
19 Question Nos. 9-10 and 17-29). The tasks included scoping and study
20 area delineation, data collection, constraints mapping, preliminary
21 alternative route identification, participation in a public participation
22 meeting, modification/addition of alternative route links following the public
23 participation meeting, and alternative route development. True and
24 correct copies of Section 37.056 of the Texas Utilities Code and 16 TAC §
25 25.101 are attached to my direct testimony as Exhibits RJM-2 and RJM-3.

26 Q. WHAT PROCESS DID HALFF UTILIZE TO IDENTIFY PRELIMINARY
27 ALTERNATIVE ROUTES FOR THE PROPOSED TRANSMISSION LINE
28 PROJECT?

1 A. To identify preliminary alternative routes for the Proposed Transmission
2 Line Project, Halff first delineated a study area, gathered data regarding
3 the study area, and mapped constraints within the study area.

4 The study area for the Proposed Transmission Line Project was
5 identified to include the two project end-points identified by the Applicants:
6 Oncor's proposed Sand Lake Switch Station in Ward County
7 (approximately 6 miles northeast of the City of Pecos on the northwest
8 side of Farm-to-Market Road 3398) and AEP Texas's existing Solstice
9 Switch Station in Pecos County (located on the north side of Interstate
10 Highway 10 approximately 2.5 miles east of the Pecos/Reeves County
11 line). The study area set boundaries for the data collection process and
12 was defined to include an area large enough to accommodate a
13 reasonable number of geographically diverse, forward-progressing
14 alternatives routes for the Proposed Transmission Line Project.

15 Halff defined an irregular-shaped study area to encompass the
16 identified end-points, with the longer axis (approximately 38 miles) aligned
17 north-to-south. Both the northern and southern halves are approximately
18 25 miles east-to-west. Figures 2-1 and 2-2 of the EA set forth the study
19 area delineated by Halff.

20 After the study area was defined, the Halff Project Team initiated a
21 variety of data collection activities. One of the data collection activities
22 was the development of a list of local officials and departments and local,
23 state, and federal regulatory agencies to be mailed a consultation letter
24 regarding the Proposed Transmission Line Project. Halff mailed out
25 consultation letters concerning the study area beginning in May 2018.
26 The purpose of the letters was to inform the various officials and agencies
27 about the project and to give those officials and agencies the opportunity
28 to provide any information they had regarding the project and/or general
29 project area. In response, Halff and Applicants received written and
30 verbal information from various public officials.

1 Among other things, data collection activities also consisted of file
2 and record reviews of various regulatory agency databases, published
3 literature, and a variety of available maps, including recent aerial
4 photography, topographical maps from the U.S. Geological Survey, county
5 highway maps, and county appraisal district land parcel boundary maps.
6 During the course of the data collection activities, Halff personnel also
7 conducted numerous reconnaissance surveys of the study area from June
8 to September 2018.

9 Given that a number of potential routes could be drawn to connect
10 the end-points, a constraint mapping process was used in selecting and
11 refining possible alternative routes. The information collected during the
12 various data collection activities was utilized to develop an environmental
13 and land use constraints map. Figures 3-1A and 3-1B of the EA depict the
14 environmental and land use constraints compiled by Halff.

15 Upon completion of the initial data collection activities and
16 constraint mapping process, the next step in the routing process was to
17 identify preliminary alternative links to connect the Sand Lake and Solstice
18 stations. Halff initially identified 48 preliminary alternative links. As
19 discussed later in my testimony, Halff, in consultation with Applicants,
20 continued to refine the number and location of potential alternative links
21 and routes for the Proposed Transmission Line Project. In identifying
22 preliminary alternative links, Halff considered a variety of information,
23 including among other things: input received from the various
24 correspondence with public officials and representatives of state and
25 federal agencies; results of the visual reconnaissance surveys of the study
26 area; review of aerial photography; findings of the other various data
27 collection activities; the environmental and land use constraints map; the
28 location of existing development; the location of existing compatible
29 corridors; apparent property boundaries; and other transmission line
30 projects being studied in the region. The preliminary alternative links

1 initially identified by Halff are shown on Exhibit 1 (page B-11) to Appendix
2 B of the EA.

3 Q. PLEASE DESCRIBE HALFF'S APPROACH TO ROUTING THE
4 PROPOSED TRANSMISSION LINE PROJECT RELATIVE TO THE
5 OTHER ONGOING TRANSMISSION LINE PROJECT INVOLVING
6 SOLSTICE SWITCH.

7 A. As noted in Section 4.0 (page 4-3) of the EA, route development in the
8 southeastern region of the Proposed Transmission Line Project's study
9 area considered the new Bakersfield – Solstice 345 kV transmission line
10 project concurrently being developed by AEP Texas and the Lower
11 Colorado River Authority Transmission Services Corporation. Applicants
12 provided Halff with preliminary route data for this concurrent project, with
13 focus on those portions of the study area and preliminary alternative
14 routes that approach Solstice Switch. In order to avoid the possibility of
15 overlapping or conflicting routes and other land use constraints, Halff did
16 not develop preliminary alternative routes in this portion of the study area.
17 This approach is also consistent with Applicants' preference to avoid
18 multiple crossings of a double-circuit 345 kV transmission line with another
19 double-circuit 345 kV transmission line.

20 Q. PLEASE DESCRIBE THE PUBLIC INVOLVEMENT PROGRAM
21 UTILIZED FOR THIS PROJECT.

22 A. The public involvement program included a public participation meeting,
23 consultation with local officials and departments and local, state, and
24 federal regulatory agencies, and information received from other
25 interested parties. The purpose of consulting with public officials and
26 other interested parties was to provide those parties with information
27 regarding the process of transmission line routing and to get input from
28 those parties regarding proposed projects or other land use constraints
29 that could have an impact on potential alternative routes.

1 The purposes of the public participation meeting, held at the
2 Reeves County Civic Center in Pecos, Texas, on August 15, 2018, were
3 to: (1) solicit comments and input from residents, landowners, public
4 officials, and other interested parties concerning the proposed project, the
5 preliminary alternative links, and the overall transmission line routing
6 process; (2) promote a better understanding of the proposed project,
7 including the purpose, need, potential benefits, and impacts of the project;
8 (3) inform the public with regard to the routing procedure, schedule, and
9 decision-making process; and (4) gather information about the values and
10 concerns of the public and community leaders.

11 The public involvement program also included consultation and
12 solicitation of information from local officials and various state and federal
13 agencies to give such officials and agencies the opportunity to provide
14 Halff with any information they had regarding the project and/or project
15 area. Information received from the public involvement program was
16 considered and incorporated into Halff's evaluation of the proposed
17 project. Correspondence to and from local officials and state and federal
18 agencies is located in Appendix A of the EA.

19 Q. HOW DID HALFF RECEIVE FEEDBACK FROM ATTENDEES OF THE
20 PUBLIC PARTICIPATION MEETING?

21 A. Feedback from the public participation meeting was received in two
22 primary ways. First, attendees had one-on-one conversations with
23 personnel from Halff and Applicants, as well as property abstracting
24 company TRC Solutions, Inc., about their interests and comments about
25 the project. During the one-on-one conversations, attendees provided
26 comments and clarifications regarding structures and features depicted on
27 the large aerial photographs displayed at the public participation meeting.
28 Attendees were encouraged to locate and mark particular features of
29 interest on the aerial exhibits and at the Geographic Information System
30 (GIS) computer stations. In that manner, Halff gained insight into

1 particular features of the study area as well as a sense of those values
2 important to the communities potentially impacted by the proposed project.

3 Second, each attendee of a public participation meeting received a
4 questionnaire that solicited comments on the proposed project. Of the
5 nine (9) people who signed in as attending the public participation
6 meeting, one submitted a questionnaire at the meeting, and one public
7 official submitted electronic data on City of Pecos water wells and
8 pipelines via email after the public meeting. Halff reviewed and evaluated
9 the questionnaire and data provided. Halff obtained additional information
10 during subsequent reconnaissance surveys following the public
11 participation meeting. That information was considered in the overall
12 identification and evaluation of the alternative routes. Section 5.0 of the
13 EA discusses in summary form the response received from the
14 questionnaires provided at the public participation meeting.

15 Q. DID HALFF MAKE ANY MODIFICATIONS TO THE PRELIMINARY
16 ALTERNATIVE LINKS BASED ON INPUT RECEIVED FROM THE
17 PUBLIC INVOLVEMENT PROGRAM AND SUBSEQUENT
18 RECONNAISSANCE SURVEYS?

19 A. Yes. Based on input, comments, and information received by Halff at and
20 following the public participation meeting and subsequent reconnaissance
21 surveys, Halff identified modifications to portions of existing preliminary
22 alternative links, identified new links that were not delineated at the time of
23 the public participation meeting, and deleted other links. Specifically, 36
24 modifications were made to portions of numerous preliminary alternative
25 links. Some of these modifications include preliminary alternative links
26 that were divided into two renamed links because of a nearby
27 modification. These renamed splits resulted in a net increase of 5
28 alternative links. No links were added or deleted from the preliminary
29 alternative links. Modifications to preliminary links were made to, among
30 other things, accommodate City of Pecos water facilities, new oil and gas

1 facilities, and other new construction. Section 6.0 of the EA describes the
2 route modifications that were implemented by Halff following the public
3 participation meeting.

4 After the existing preliminary alternative route links were modified
5 and new route links defined, various combinations of 53 links were used to
6 form 408 preliminary alternative routes for the Proposed Transmission
7 Line Project, which were analyzed in further detail by Halff.

8 Q. PLEASE DESCRIBE THE PROCESS FOLLOWED BY HALFF TO
9 EVALUATE THE 408 PRELIMINARY ALTERNATIVE ROUTES.

10 A. The Halff Project Team evaluated the preliminary alternative routes based
11 upon the requirements set forth in Section 37.056(c)(4)(A)-(D) of the
12 Texas Utilities Code, 16 TAC § 25.101(b)(3)(B), the Commission's CCN
13 application form requirements, and Applicants' project-specific guidelines
14 for its design, engineering, and related issues. Section 7.0 of the EA
15 describes the evaluation of the alternative routes.

16 Q. BRIEFLY DESCRIBE YOUR UNDERSTANDING OF THE
17 COMMISSION'S POLICY OF PRUDENT AVOIDANCE.

18 A. 16 TAC § 25.101 defines prudent avoidance as "the limiting of exposures
19 to electric and magnetic fields that can be avoided with reasonable
20 investments of money and effort." My understanding of the Commission's
21 policy of prudent avoidance is that the process of routing a proposed
22 transmission line should include consideration of routing options that will
23 reasonably avoid population centers and other locations where people
24 gather. This does not mean that a proposed transmission line must avoid
25 habitable structures at all costs, but that reasonable alternatives should be
26 considered.

27 Q. IN DEVELOPING THE PROPOSED ALTERNATIVE ROUTES, DID
28 HALFF ATTEMPT TO FOLLOW PROPERTY BOUNDARIES?

29 A. Yes. However, for a number of reasons, paralleling property lines was not
30 possible in all instances. For example, an inverse relationship exists

1 between following compatible corridors and property boundaries. Given
2 that most existing, compatible corridors do not follow property boundaries,
3 as the amount of a proposed route parallel to corridors increases, the
4 amount of the line parallel to property boundaries will naturally decrease.
5 Additionally, in some areas of the study area the orientation of property
6 boundaries makes paralleling impractical. For example, curved or
7 irregular property lines make it difficult to parallel property boundaries
8 without adding substantial additional length or numerous large angle
9 structures. However, even given these limitations, Halff considered the
10 paralleling of property boundaries and in the absence of other compatible
11 corridors, attempted to follow property boundaries, where appropriate,
12 when routing for the Proposed Transmission Line Project.

13 Q. IN DEVELOPING THE ALTERNATIVE ROUTES, DID HALFF UTILIZE
14 ANY COMPATIBLE RIGHTS-OF-WAY WITHIN THE MEANING OF 16
15 TEX. ADMIN. CODE § 25.101(b)(3)(B)(i)-(ii)?

16 A. No compatible corridor rights-of-way were utilized in the sense that the
17 alternative routes are not located within or overlapping such rights-of-way.
18 The alternative routes parallel numerous compatible rights-of-way as
19 shown in Table 7-2 of the EA.

20 Q. WHAT ARE THE RESULTS OF HALFF'S INVESTIGATIONS
21 REGARDING THE PROPOSED TRANSMISSION LINE PROJECT?

22 A. Along the 408 routes evaluated by Halff, construction of the Proposed
23 Transmission Line Project should not be expected to have a significant
24 impact on existing: physiographic or geologic features/resources; soils and
25 prime farmland; water resources; plant, fish, and wildlife species and
26 ecosystems; natural resources; land use; or cultural resources. Section
27 7.0 of the EA describes in detail the results of the alternative route
28 evaluations and any potential impacts for all the routes.

1 Q. ARE THE ROUTES INCLUDED IN THE APPLICATION CONSISTENT
2 WITH THE APPLICABLE PROVISIONS OF THE TEXAS UTILITIES
3 CODE AND THE COMMISSION'S SUBSTANTIVE RULES?

4 A. Yes. The Halff Project Team, with expertise in different disciplines
5 (physiography, geology, water resources, soils, vegetation ecology, fish
6 and wildlife ecology, land use/aesthetics, maps/figures/graphics, cultural
7 resources, etc.), delineated and evaluated potential alternative routes for
8 the Proposed Transmission Line Project based upon environmental and
9 land use conditions present along each potential route, reconnaissance
10 surveys, and the public involvement program. The routes included in the
11 Application were evaluated by Halff in accordance with the requirements
12 of Section 37.056(c)(4)(A)-(D) of the Texas Utilities Code and 16 TAC
13 § 25.101. All of the 408 alternative routes provided to Applicants comply
14 with the routing requirements of Section 37.056(c)(4)(A)-(D) of the Texas
15 Utilities Code and 16 TAC § 25.101, including the policy of prudent
16 avoidance.

17 **IV. CONCLUSION**

18 Q. DOES THIS CONCLUDE YOUR DIRECT TESTIMONY?

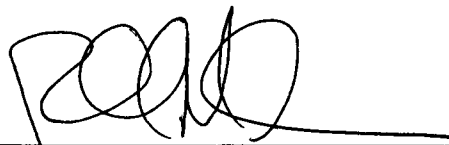
19 A. Yes, it does.

AFFIDAVIT

STATE OF TEXAS §
 §
COUNTY OF DALLAS §

BEFORE ME, the undersigned authority, on this day personally appeared Russell J. Marusak who, having been placed under oath by me, did depose as follows:

My name is Russell J. Marusak. I am of legal age and a resident of the State of Texas. The foregoing testimony and exhibit offered by me are true and correct, and the opinions stated therein are, to the best of my knowledge and belief, accurate, true and correct.



Russell J. Marusak

SUBSCRIBED AND SWORN TO BEFORE ME on this 5th day of November, 2018.


Notary Public, State of Texas

My Commission Expires

March 13, 2019



PUC Docket No. 48785

**Marusak – Direct
Oncor & AEP Texas
Sand Lake – Solstice CCN**

Russell Marusak
Environmental Scientist
Halff Associates, Inc. (Halff)

Education

M.A., Biology – University of
North Texas, 2013

B.S., Wildlife and Fisheries
Sciences – Texas A&M
University, 1995

Mr. Marusak's principle field of experience has been in the project management, conduct, support services, and production of Environmental Assessments (EAs) for a range of projects including electric transmission lines, pipeline utility projects, and habitat restoration projects. Mr. Marusak also has extensive experience as a regulatory specialist, managing projects that require permitting from the U.S Army Corps of Engineers (USACE) under Section 404 of the Clean Water Act (§404).

Since joining the staff at Halff, Mr. Marusak has been involved in a variety of projects in the area of environmental planning services. In addition to involvement in EAs and routing studies for various linear projects, these activities also have included jurisdictional determinations of waters of the United States as regulated under §404, and preparing several §404 permit applications that have received USACE approval. He has also provided testimony regarding §404 requirements in support of state landfill permits in the State of Texas.

Mr. Marusak's representative project experience includes the following:

Riverton—Sand Lake 345 kV Transmission Line Project, Oncor Electric Delivery Company - Project Manager for EA and Alternative Routing Analysis for a proposed 37-42 -mile long 345 kV transmission line project in Loving, Reeves, and Ward Counties, Texas. Project coordinator of a multi-disciplinary team of scientists including archeologist, biologist, ecologist, landuse planners, etc. to evaluate the environmental and land use impacts for the proposed transmission line project.

Tunstall kV Transmission Line Project, Oncor Electric Delivery Company - Project Manager for EA and Alternative Routing Analysis for a proposed 5-6 -mile long 138 kV transmission line project in Reeves County, Texas. Project coordinator of a multi-disciplinary team of scientists including archeologist, biologist, ecologist, landuse planners, etc. to evaluate the environmental and land use impacts for the proposed transmission line project.

Balding POD 138 kV Transmission Line Project, Oncor Electric Delivery Company- Project Manager for EA in support of a 2.5-mile single route 138 kV transmission line project in Winkler County, Texas. Project coordinator of a multi-disciplinary team of scientists including archeologist, biologist, ecologist, landuse planners, etc. to evaluate the environmental and land use impacts for the proposed transmission line project.

Littman—Philips Andrews 138 kV Transmission Line Project, Oncor Electric Delivery Company - Project Manager for EA and Alternative Routing Analysis for a proposed 11-mile long 138 kV transmission line project in Andrews County, Texas. Project coordinator of a multi-disciplinary team of scientists including archeologist, biologist, ecologist, landuse planners, etc. to evaluate the environmental and land use impacts for the proposed transmission line project.

New Bethel 345 kV Transmission Line Project, Oncor Electric Delivery Company - Project Manager for ongoing EA and Alternative Routing Analysis for a proposed 12-27 mile long 345 kV transmission line project in Navarro, Henderson, Freestone, and Anderson Counties, Texas. Project coordinator of a multi-disciplinary team of scientists including archeologist, biologist, ecologist, landuse planners, etc. to evaluate the environmental and land use impacts for the proposed transmission line project.

Krum West—Anna 345 kV Transmission Line Project, Oncor Electric Delivery Company – Project Manager for EA and Alternative Routing Analysis for a proposed 40-100 -mile long 345 kV transmission line project in Cooke, Grayson, Collin, and Denton Counties, Texas. Project coordinator of a multi-disciplinary team of scientists including archeologist, biologist, ecologist, landuse planners, etc. to evaluate the environmental and land use impacts for the proposed transmission line project.

Riley—Krum West 345 kV Transmission Line Project, Oncor Electric Delivery Company – Project Manager for EA and Alternative Routing Analysis for a proposed 140-mile long 345 kV transmission line project in Wilbarger, Wichita, Archer, Clay, Jack, Montague, Cooke, Wise, and Denton Counties, Texas. Project coordinator of a multi-disciplinary team of scientists including archeologist, biologist, ecologist, landuse planners, etc. to evaluate the environmental and land use impacts for the proposed transmission line project.

Riley—Bowman 345 kV Transmission Line Project, Oncor Electric Delivery Company – Project Manager for EA and Alternative Routing Analysis for a proposed 38-mile long 345 kV transmission line project in Archer, Wichita, and Wilbarger Counties, Texas. Project coordinator of a multi-disciplinary team of scientists including archeologist, biologist, ecologist, landuse planners, etc. to evaluate the environmental and land use impacts for the proposed transmission line project.

Venus—Liggett 345 kV Transmission Line Project, TXU Electric Delivery Company – Managed and prepared an EA and Alternative Routing Analysis for a proposed 32-mile long 345 kV transmission line project in Dallas, Tarrant, Johnson, and Ellis Counties, Texas. Project

coordinator of a multidisciplinary team of scientists including archaeologist, biologist, ecologist, landuse planners, etc. to evaluate the environmental and land use impact and select a preferred route for the proposed transmission line project.

Jacksboro Landfill, IESI Texas Landfill, L.P. (IESI) – Managed and prepared necessary documents to acquire §404 nationwide permit for the proposed Jacksboro Landfill in Jack County, Texas. Also responsible for threatened and endangered species coordination at the state and federal level and development of compensatory mitigation plans. Served as expert witness for §404 and threatened and endangered species in support of municipal solid waste landfill permit application pursuant to the Texas Administrative Code.

130 Environmental Park – Managed and prepared necessary documents to acquire §404 nationwide permit for the proposed 130 Environmental Park in Caldwell County, Texas. Also responsible for threatened and endangered species coordination at the state and federal level and development of on-site mitigation plans. Served as expert witness for §404 and threatened and endangered species in support of municipal solid waste landfill permit application pursuant to the Texas Administrative Code.

McCommas Bluff Landfill, City of Dallas – Managed and prepared necessary documents to acquire §404 individual permit for the for the McCommas Bluff Landfill levee expansion. Acquired joint State 401 Water Quality Certification from TCEQ, assisting in coordination of neighborhood meeting for City of Dallas floodplain fill permit requirements, and coordinated mitigative measures with the USFWS regarding potential threatened and endangered species habitat. Also responsible for developing mitigation plan habitat landscape concepts as a support service to the overall civil design. Conducted §404 monitoring and provided necessary documentation to the USACE during construction management phase of project.

Detailed Project Report and Environmental Assessment for the Lake Lewisville Section 1135 Ecosystem Restoration Project, USACE Fort Worth District– Managed and prepared an EA for a proposed habitat restoration project in Denton and Collin County, Texas. The EA and environmental studies included a meeting with the USACE Fort Worth District and United States Fish and Wildlife Service (USFWS) Arlington Field Office to discuss a scope to prepare the EA; incremental cost analysis using USACE software tool; ecological investigations including a USFWS Habitat Evaluation Procedure; general habitat survey; landscape trail design; and hazardous materials investigation. A subsequent Finding of No Significant Impact (FONSI) was issued.

Detailed Project Report and Environmental Assessment for the Middle Brazos River Section 206 Ecosystem Restoration Project,

USACE Fort Worth District – Managed and prepared an EA for a proposed habitat restoration project in the north Bosque River Watershed. The EA and environmental studies included a meeting with the USACE Fort Worth District and United States Fish and Wildlife Service (USFWS) Arlington Field Office to discuss a scope to prepare the Environmental Assessment; ecological investigations including a USFWS Habitat Evaluation Procedure; general habitat survey; and coordinating general civil design.

Multiple Section 10 (§10), §404 and Tree Removal Permits for the West Fork Natural Gas Pipeline, Dale Resources – Managed and prepared necessary documents to acquire §404 and §10 permits for various segments of approximately 20+ miles of natural gas transmission lines in Tarrant County, Texas. Duties included production of lease map and environmental and landuse constraints maps, coordinating with local city governments, and coordinating with land men in selection of final pipeline routes. Duties also included necessary field work and document preparation to receive tree removal permits from local governments where necessary.

North Bosque River Section 206 Aquatic Ecosystem Restoration Project Design, USACE Fort Worth District – Managed preparation of design plans and specifications for a stream restoration and wetland creation project for USACE Fort Worth District. Project was the next progressive phase after the Detailed Project Report and EA, in which conceptual design information is developed and incorporated into a detailed plan and specification package with cost estimates. Responsible for developing habitat landscape concepts and coordinating civil design, and serving as the primary contact with the USACE project review team.

Johnson Creek Recreation Facilities and Ecosystem Recreation Project, USACE Fort Worth District – Assisted in preparation of design plans and specifications for a stream restoration project for USACE Fort Worth District. Project was the next progressive phase after the Feasibility Report and Integrated EA, in which conceptual design information is developed and incorporated into a detailed plan and specification package with cost estimates. Responsible for developing habitat landscape concepts as a support service to the overall civil design.

EPA Compliance Case I-5227, Wharton County – Managed and prepared necessary documents to resolve Environmental Protection Agency (EPA) compliance case regarding a §404 violation in Wharton County, Texas. Conducted after-the-fact jurisdictional determination of waters of the United States, coordinated archaeological investigations, served as primary contact to the EPA compliance case manager on behalf of Wharton County, and prepared EPA-approved compensatory mitigation plan.

Timber Creek Commercial Development, Trammell Crow Company – Managed and prepared necessary documents to acquire §404 individual permit for urban redevelopment project in the City of Dallas. Acquired joint State 401 Water Quality Certification from Texas Commission on Environmental Quality (TCEQ), assisting in coordination of neighborhood meeting for City of Dallas floodplain fill permit requirements, thereby fulfilling TCEQ request for a public meeting. Conducted and prepared tree survey for 1,000+ trees to meet City of Dallas floodplain and tree removal requirements.

Chapman Lake Water Main, Phase II, Dallas Water Utilities – Managed and prepared necessary documents to acquire §404 nationwide permit for the Chapman Lake Water Main, Phase II in Denton and Collin Counties. Responsible for conducting jurisdictional determination of waters of the United States for 30-mile project corridor from Lake Lavon to Lake Lewisville. Prepared joint compensatory mitigation plan necessary for §404 nationwide permit and for acquiring easements across USACE-owned property adjacent to Lake Lavon.

Licenses, Registrations, Seminars

ISA Certified Arborist TX #3252A

8-hour “Interim Regional Supplement to the Corps of Engineers Wetland Delineation: Great Plains Region” Training Course

USACE 1999 Streambank Restoration Seminar

40-Hour OSHA Training, 29 CFR 1910.120

40-hour 1998 Wetland Delineation Training Course

32-hour 1998 Wetland Design and Construction Course

Sec. 37.056. GRANT OR DENIAL OF CERTIFICATE. (a) The commission may approve an application and grant a certificate only if the commission finds that the certificate is necessary for the service, accommodation, convenience, or safety of the public.

(b) The commission may:

- (1) grant the certificate as requested;
- (2) grant the certificate for the construction of a portion of the requested system, facility, or extension or the partial exercise of the requested right or privilege; or
- (3) refuse to grant the certificate.

(c) The commission shall grant each certificate on a nondiscriminatory basis after considering:

- (1) the adequacy of existing service;
- (2) the need for additional service;
- (3) the effect of granting the certificate on the recipient of the certificate and any electric utility serving the proximate area; and
- (4) other factors, such as:
 - (A) community values;
 - (B) recreational and park areas;
 - (C) historical and aesthetic values;
 - (D) environmental integrity;
 - (E) the probable improvement of service or lowering of cost to consumers in the area if the certificate is granted; and
 - (F) to the extent applicable, the effect of granting the certificate on the ability of this state to meet the goal established by Section 39.904(a) of this title.

(d) The commission by rule shall establish criteria, in addition to the criteria described by Subsection (c), for granting a certificate for a transmission project that serves the ERCOT power region, that is not necessary to meet state or federal reliability standards, and that does not serve a competitive renewable energy zone. The criteria must include a comparison of the estimated cost of the transmission project and the estimated cost savings that may result from the transmission project. The commission shall include with its decision on an application for a certificate to which this subsection applies findings on the criteria.

Acts 1997, 75th Leg., ch. 166, Sec. 1, eff. Sept. 1, 1997. Amended by Acts 2003, 78th Leg., ch. 295, Sec. 2, eff. June 18, 2003.

Amended by:

Acts 2011, 82nd Leg., R.S., Ch. 949 (H.B. 971), Sec. 2(a), eff. June 17, 2011.

§25.101. Certification Criteria.

- (a) **Definitions.** The following words and terms, when used in this section, shall have the following meanings unless the context clearly indicates otherwise:
- (1) **Construction and/or extension** -- Shall not include the purchase or condemnation of real property for use as facility sites or right-of-way. Acquisition of right-of-way shall not be deemed to entitle an electric utility to the grant of a certificate of convenience and necessity without showing that the construction and/or extension is necessary for the service, accommodation, convenience, or safety of the public.
 - (2) **Generating unit** -- Any electric generating facility. This section does not apply to any generating unit that is less than ten megawatts and is built for experimental purposes only.
 - (3) **Habitable structures** -- Structures normally inhabited by humans or intended to be inhabited by humans on a daily or regular basis. Habitable structures include, but are not limited to: single-family and multi-family dwellings and related structures, mobile homes, apartment buildings, commercial structures, industrial structures, business structures, churches, hospitals, nursing homes, and schools.
 - (4) **Municipal Power Agency (MPA)** -- Agency or group created under Texas Utilities Code, Chapter 163 – Joint Powers Agencies.
 - (5) **Municipal Public Entity (MPE)** -- A municipally owned utility (MOU) or a municipal power agency.
 - (6) **Prudent avoidance** -- The limiting of exposures to electric and magnetic fields that can be avoided with reasonable investments of money and effort.
 - (7) **Tie line** -- A facility to be interconnected to the Electric Reliability Council of Texas (ERCOT) transmission grid by a person, including an electric utility or MPE, that would enable additional power to be imported into or exported out of the ERCOT power grid.
- (b) **Certificates of convenience and necessity for new service areas and facilities.** Except for certificates granted under subsection (e) of this section, the commission may grant an application and issue a certificate only if it finds that the certificate is necessary for the service, accommodation, convenience, or safety of the public, and complies with the statutory requirements in the Public Utility Regulatory Act (PURA) §37.056. The commission may issue a certificate as applied for, or refuse to issue it, or issue it for the construction of a portion of the contemplated system or facility or extension thereof, or for the partial exercise only of the right or privilege. The commission shall render a decision approving or denying an application for a certificate within one year of the date of filing of a complete application for such a certificate, unless good cause is shown for exceeding that period. A certificate, or certificate amendment, is required for the following:
- (1) **Change in service area.** Any certificate granted under this section shall not be construed to vest exclusive service or property rights in and to the area certificated.
 - (A) **Uncontested applications:** An application for a certificate under this paragraph shall be approved administratively within 80 days from the date of filing a complete application if:
 - (i) no motion to intervene has been filed or the application is uncontested;
 - (ii) all owners of land that is affected by the change in service area and all customers in the service area being changed have been given direct mail notice of the application; and
 - (iii) commission staff has determined that the application is complete and meets all applicable statutory criteria and filing requirements, including, but not limited to, the provision of proper notice of the application.
 - (B) **Minor boundary changes or service area exceptions:** Applications for minor boundary changes or service area exceptions shall be approved administratively within 45 days of the filing of the application provided that:

- (i) every utility whose certificated service area is affected agrees to the change;
 - (ii) all customers within the affected area have given prior consent; and
 - (iii) commission staff has determined that the application is complete and meets all applicable statutory criteria and filing requirements, including, but not limited to, the provision of proper notice of the application.
- (2) **Generation facility.**
 - (A) In a proceeding involving the purchase of an existing electric generating facility by an electric utility that operates solely outside of ERCOT, the commission shall issue a final order on a certificate for the facility not later than the 181st day after the date a request for the certificate is filed with the commission under PURA §37.058(b).
 - (B) In a proceeding involving a newly constructed generating facility by an electric utility that operates solely outside of ERCOT, the commission shall issue a final order on a certificate for the facility not later than the 366th day after the date a request for the certificate is filed with the commission under PURA §37.058(b).
- (3) **Electric transmission line.** All new electric transmission lines shall be reported to the commission in accordance with §25.83 of this title (relating to Transmission Construction Reports). This reporting requirement is also applicable to new electric transmission lines to be constructed by an MPE seeking to directly or indirectly construct, install, or extend a transmission facility outside of its applicable boundaries. For an MOU, the applicable boundaries are the municipal boundaries of the municipality that owns the MOU. For an MPA, the applicable boundaries are the municipal boundaries of the public entities participating in the MPA.
 - (A) Need:
 - (i) Except as stated below, the following must be met for a transmission line in the ERCOT power region. The applicant must present an economic cost-benefit study that includes an analysis that shows that the levelized ERCOT-wide annual production cost savings attributable to the proposed project are equal to or greater than the first-year annual revenue requirement of the proposed project of which the transmission line is a part. Indirect costs and benefits to the transmission system may be included in the cost-benefit study. The commission shall give great weight to such a study if it is conducted by the ERCOT independent system operator. This requirement also does not apply to an application for a transmission line that is necessary to meet state or federal reliability standards, including: a transmission line needed to interconnect a transmission service customer or end-use customer; or needed due to the requirements of any federal, state, county, or municipal government body or agency for purposes including, but not limited to, highway transportation, airport construction, public safety, or air or water quality.
 - (ii) For a transmission line not addressed by clause (i) of this subparagraph, the commission shall consider among other factors, the needs of the interconnected transmission systems to support a reliable and adequate network and to facilitate robust wholesale competition. The commission shall give great weight to:
 - (I) the recommendation of an organization that meets the requirement of PURA §39.151; and/or
 - (II) written documentation that the transmission line is needed to interconnect a transmission service customer or an end-use customer.

- (B) **Routing:** An application for a new transmission line shall address the criteria in PURA §37.056(c) and considering those criteria, engineering constraints, and costs, the line shall be routed to the extent reasonable to moderate the impact on the affected community and landowners unless grid reliability and security dictate otherwise. The following factors shall be considered in the selection of the utility's alternative routes unless a route is agreed to by the utility, the landowners whose property is crossed by the proposed line, and owners of land that contains a habitable structure within 300 feet of the centerline of a transmission project of 230 kV or less, or within 500 feet of the centerline of a transmission project greater than 230 kV, and otherwise conforms to the criteria in PURA §37.056(c):
 - (i) whether the routes parallel or utilize existing compatible rights-of-way for electric facilities, including the use of vacant positions on existing multiple-circuit transmission lines;
 - (ii) whether the routes parallel or utilize other existing compatible rights-of-way, including roads, highways, railroads, or telephone utility rights-of-way;
 - (iii) whether the routes parallel property lines or other natural or cultural features; and
 - (iv) whether the routes conform with the policy of prudent avoidance.
 - (C) **Uncontested transmission lines:** An application for a certificate for a transmission line shall be approved administratively within 80 days from the date of filing a complete application if:
 - (i) no motion to intervene has been filed or the application is uncontested; and
 - (ii) commission staff has determined that the application is complete and meets all applicable statutory criteria and filing requirements, including, but not limited to, the provision of proper notice of the application.
 - (D) **Projects deemed critical to reliability.** Applications for transmission lines which have been formally designated by a PURA §39.151 organization as critical to the reliability of the system shall be considered by the commission on an expedited basis. The commission shall render a decision approving or denying an application for a certificate under this subparagraph within 180 days of the date of filing a complete application for such a certificate unless good cause is shown for extending that period.
- (4) **Tie line.** An application for a tie line must include a study of the tie line by the ERCOT independent system operator. The study shall include, at a minimum, an ERCOT-approved reliability assessment of the proposed tie line. If an independent system operator intends to conduct a study to evaluate a proposed tie line or intends to provide confidential information to another entity to permit the study of a proposed tie line, the independent system operator shall file notice with the commission at least 45 days prior to the commencement of such a study or the provision of such information. This paragraph does not apply to a facility that is in service on December 31, 2014.
- (c) **Projects or activities not requiring a certificate.** A certificate, or certificate amendment, is not required for the following:
- (1) A contiguous extension of those facilities described in PURA §37.052;
 - (2) A new electric high voltage switching station, or substation;
 - (3) The repair or reconstruction of a transmission facility due to emergencies. The repair or reconstruction of a transmission facility due to emergencies shall proceed without delay or prior approval of the commission and shall be reported to the commission in accordance with §25.83 of this title;
 - (4) The construction or upgrading of distribution facilities within the electric utility's service area;

- (5) Routine activities associated with transmission facilities that are conducted by transmission service providers. Nothing contained in the following subparagraphs should be construed as a limitation of the commission's authority as set forth in PURA. Any activity described in the following subparagraphs shall be reported to the commission in accordance with §25.83 of this title. The commission may require additional facts or call a public hearing thereon to determine whether a certificate of convenience and necessity is required. Routine activities are defined as follows:
- (A) The modification or extension of an existing transmission line solely to provide service to a substation or metering point provided that:
 - (i) an extension to a substation or metering point does not exceed one mile; and
 - (ii) all landowners whose property is crossed by the transmission facilities have given prior written consent.
 - (B) The rebuilding, replacement, or respacing of structures along an existing route of the transmission line; upgrading to a higher voltage not greater than 230 kV; bundling of conductors or reconductoring of an existing transmission facility, provided that:
 - (i) no additional right-of-way is required; or
 - (ii) if additional right-of-way is required, all landowners of property crossed by the electric facilities have given prior written consent.
 - (C) The installation, on an existing transmission line, of an additional circuit not previously certificated, provided that:
 - (i) the additional circuit is not greater than 230 kV; and
 - (ii) all landowners whose property is crossed by the transmission facilities have given prior written consent.
 - (D) The relocation of all or part of an existing transmission facility due to a request for relocation, provided that:
 - (i) the relocation is to be done at the expense of the requesting party; and
 - (ii) the relocation is solely on a right-of-way provided by the requesting party.
 - (E) The relocation or alteration of all or part of an existing transmission facility to avoid or eliminate existing or impending encroachments, provided that all landowners of property crossed by the electric facilities have given prior written consent.
 - (F) The relocation, alteration, or reconstruction of a transmission facility due to the requirements of any federal, state, county, or municipal governmental body or agency for purposes including, but not limited to, highway transportation, airport construction, public safety, or air and water quality, provided that:
 - (i) all landowners of property crossed by the electric facilities have given prior written consent; and
 - (ii) the relocation, alteration, or reconstruction is responsive to the governmental request.
- (6) Upgrades to an existing transmission line by an MPE that do not require any additional land, right-of-way, easement, or other property not owned by the MOU;
- (7) The construction, installation, or extension of a transmission facility by an MPE that is entirely located not more than 10 miles outside of an MOU's certificated service area that occurs before September 1, 2021; or
- (8) A transmission facility by an MOU placed in service after September 1, 2015, that is developed to interconnect a new natural gas generation facility to the ERCOT transmission grid and for which, on or before January 1, 2015, an MOU was contractually obligated to purchase at least 190 megawatts of capacity.

- (d) **Standards of construction and operation.** In determining standard practice, the commission shall be guided by the provisions of the American National Standards Institute, Incorporated, the National Electrical Safety Code, and such other codes and standards that are generally accepted by the industry, except as modified by this commission or by municipal regulations within their jurisdiction. Each electric utility shall construct, install, operate, and maintain its plant, structures, equipment, and lines in accordance with these standards, and in such manner to best accommodate the public, and to prevent interference with service furnished by other public utilities insofar as practical.
- (1) The standards of construction shall apply to, but are not limited to, the construction of any new electric transmission facilities, rebuilding, upgrading, or relocation of existing electric transmission facilities.
 - (2) For electric transmission line construction requiring the acquisition of new rights-of-way, electric utilities must include in the easement agreement, at a minimum, a provision prohibiting the new construction of any above-ground structures within the right-of-way. New construction of structures shall not include necessary repairs to existing structures, farm or livestock facilities, storage barns, hunting structures, small personal storage sheds, or similar structures. Utilities may negotiate appropriate exceptions in instances where the electric utility is subject to a restrictive agreement being granted by a governmental agency or within the constraints of an industrial site. Any exception to this paragraph must meet all applicable requirements of the National Electrical Safety Code.
 - (3) Measures shall be applied when appropriate to mitigate the adverse impacts of the construction of any new electric transmission facilities, and the rebuilding, upgrading, or relocation of existing electric transmission facilities. Mitigation measures shall be adapted to the specifics of each project and may include such requirements as:
 - (A) selective clearing of the right-of-way to minimize the amount of flora and fauna disturbed;
 - (B) implementation of erosion control measures;
 - (C) reclamation of construction sites with native species of grasses, forbs, and shrubs; and
 - (D) returning site to its original contours and grades.
- (e) **Certificates of convenience and necessity for existing service areas and facilities.** For purposes of granting these certificates for those facilities and areas in which an electric utility was providing service on September 1, 1975, or was actively engaged in the construction, installation, extension, improvement of, or addition to any facility actually used or to be used in providing electric utility service on September 1, 1975, unless found by the commission to be otherwise, the following provisions shall prevail for certification purposes:
- (1) The electrical generation facilities and service area boundary of an electric utility having such facilities in place or being actively engaged in the construction, installation, extension, improvement of, or addition to such facilities or the electric utility's system as of September 1, 1975, shall be limited, unless otherwise provided, to the facilities and real property on which the facilities were actually located, used, or dedicated as of September 1, 1975.
 - (2) The transmission facilities and service area boundary of an electric utility having such facilities in place or being actively engaged in the construction, installation, extension, improvement of, or addition to such facilities or the electric utility's system as of September 1, 1975, shall be, unless otherwise provided, the facilities and a corridor extending 100 feet on either side of said transmission facilities in place, used or dedicated as of September 1, 1975.
 - (3) The facilities and service area boundary for the following types of electric utilities providing distribution or collection service to any area, or actively engaged in the construction, installation, extension, improvement of, or addition to such facilities or the electric utility's system as of September 1, 1975, shall be limited, unless otherwise found by the commission, to the facilities and the area which lie within 200 feet of any point along a distribution line, which is specifically deemed to include service drop lines, for electrical utilities.

- (f) **Transferability of certificates.** Any certificate granted under this section is not transferable without approval of the commission and shall continue in force until further order of the commission.
- (g) **Certification forms.** All applications for certificates of convenience and necessity shall be filed on commission-prescribed forms so that the granting of certificates, both contested and uncontested, may be expedited. Forms may be obtained from Central Records.
- (h) **Commission authority.** Nothing in this section is intended to limit the commission's authority to recommend or direct the construction of transmission under PURA §§35.005, 36.008, or 39.203(e).